

## INTRODUCTION

- Botanical Family: Bignoniaceae (Bignonias, Trumper-Creepers, Jacarandas)
- Botanical Tribe: Crescentieae / Genus: Crescentia
- Six species of calabash trees: three continental and three island origin; distribution and origin in Tropical Americas
- 60+ common and indigenous names, show diverse values and meaning. Further linguistic exploration is needed.
- Crescentia cujete* has broader distribution, versatile uses, and fruit morphological variation; possible ethovarieties.
- Introduction to the insular Caribbean, sources of morphological variation and selection remained unanswered
- Studying *Crescentia* genus provides a broader perspective on evolution, human selection, adaptation, and geographic distribution patterns.
- Ethnobotanical documentation (past and present) uncovers calabash history, variation, and connection to people.
- This research explores Caribbean peoples' perception, utilization, selection, knowledge retention/reclamation/conservation, and stories of calabash trees.

## HISTORICAL & CULTURAL IMPORTANCE



## KNOWLEDGE GUARDIANS

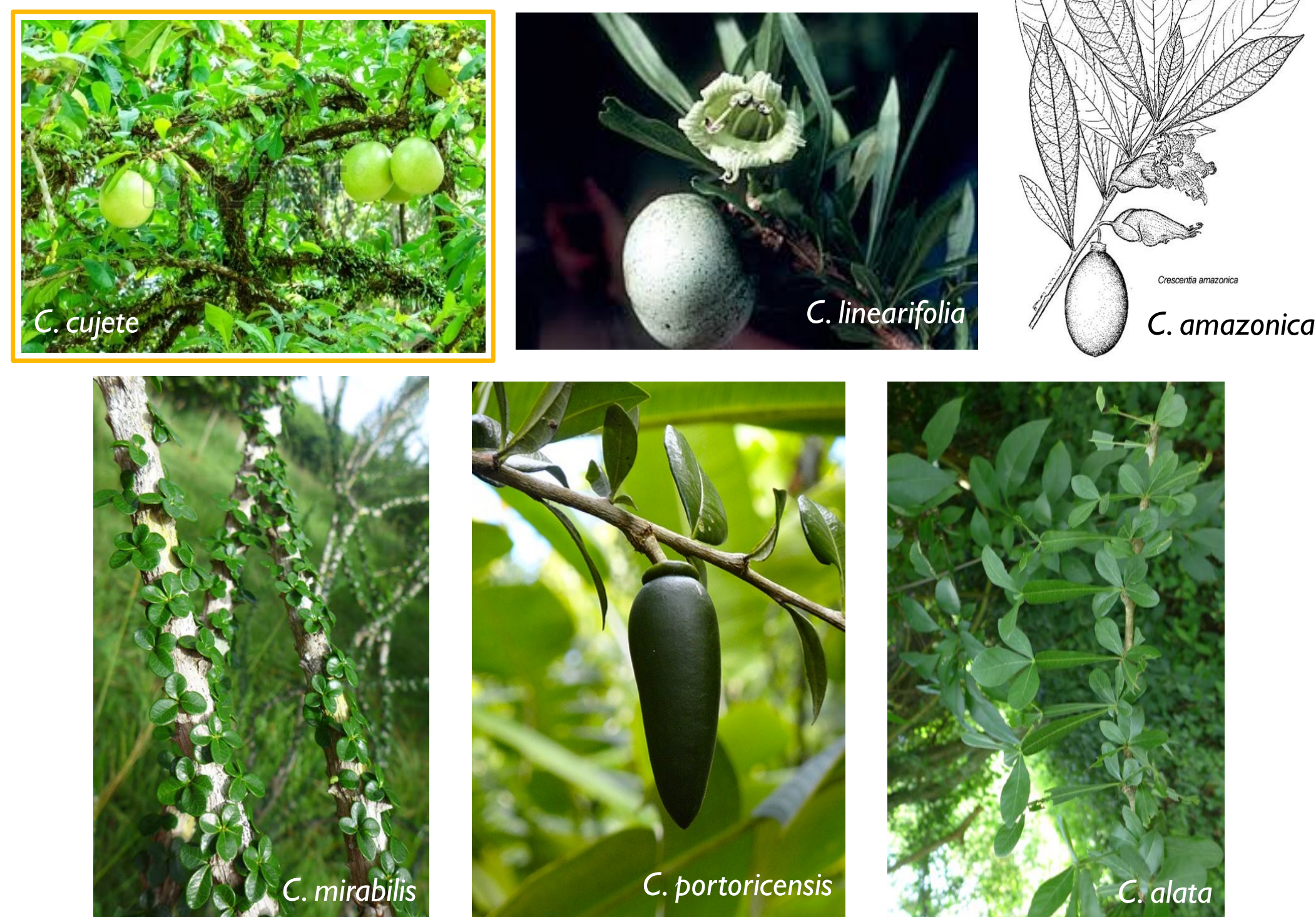


## CROSS-CARIBBEAN CONNECTIONS



- Universal calabash uses in the Americas and Caribbean: container, vessel, offerings, maracas.
- Universal Caribbean use with pulp as medicine: syrups (cooked or preserved in rum) and mixed with other plants, macerated in water, roasted to make calabash honey.
- English-speaking Caribbean: connection to ancestors and spirit realm, magic, land-marks, animal feed, medicinal (pulp and leaves), edible (pulp boiled or pickled)
- Spanish-speaking Caribbean: rituals afro-religions, other afro and taino indigenous music instruments, medicinal (roots, flower, leaves, pulp), edible (seeds), and wood.
- In Santería Afro-religion, the fruit represents the world, heaven and earth combined.
  - Connected to Elegguá, Oddua, Obatalá, Osain.
  - Featured in many rituals, from moorings to destruction. Also used in Regla de Ocho and Regla de Palo de Monte
- Crescentia cujete* is the preferred used species; but where other species co-occur they might be used in similar ways. Preference depends on what is being prepared.
  - Ex. smaller calabash for medicine making and maracas.
- Calabash valuation and stories are also passed down in music, further exploration needed.

## Crescentia, the Calabash Trees



## USES & ATTRIBUTES



- Field visits (2016, 2018-2019, 2021): Cuba, Puerto Rico, Jamaica, Dominican Republic, Mexico
- 51 interviews\* / 25 field observations / 17 informal conversations
- Artisans, healers, farmers, researchers, educators, community workers, cultural workers, musicians, families, elders, indigenous/spiritual leaders
- Ages 22 - 87 > 50+ more knowledge; but younger generation looking to learn, honor, and reclaim ancestral ways
- Gathered 15 recipes of the calabash preparation

### Calabash Positive Perceptions in the Caribbean:

grandmother tree, sacred ancestor, generous, abundant, fertile, resilient, blessing

### Calabash Negative Perceptions in the Caribbean:

toxic, stinky, harmful, dangerous, destructive

## KNOWLEDGE PRESERVATION AND RESCUE



Museo de la Higuera / Calabash Museum (Puerto Rico)



Taller Kenuati (Puerto Rico)

Mi Plantita (Puerto Rico)

**Other biocultural / ethnobotany collections**  
 WLBC & Herbaria, Missouri Botanical Garden  
 Economic Botany and Herbarium, Field Museum  
 Economic Botany and Herbarium, NYBG  
 Natural History Museum Jamaica  
 Herbarium, UNAM

## CONCLUSIONS



- Calabash trees are a sacred plant for many past and present cultures in the Americas
- They hold cultural, medicinal, material and spiritual significance across the Caribbean.
- The gourd-shaped fruit of calabash trees has diverse uses and values, and great morphological variation. Looking into the drivers of selection.
- Identifying knowledge guardians and keepers, as well as initiatives and projects preserving knowledge of calabash is crucial for conservation.
- Comparisons reveal similarities and differences in calabash uses across the Caribbean.

## OTHER PHD RESEARCH

- Cracking the Code of the calabash tribe: A Target Sequence Capture Approach to Unraveling the origins and evolution of Crescentieae (Bignoniaceae)
- Rooted Journeys: Tracing the Phylogeography and Domestication of Calabash Trees in the Caribbean
- Thriving in Diversity: Exploring Trait Responses, Local Adaptation, and Selection in Caribbean
- Roots and Rhythms: Exploring Diasporic Knowledge of the Calabash Plant
- From Colonialism to Empowerment: Exploring the Role of Ethnobotany and Food Anthropology in Puerto Rico

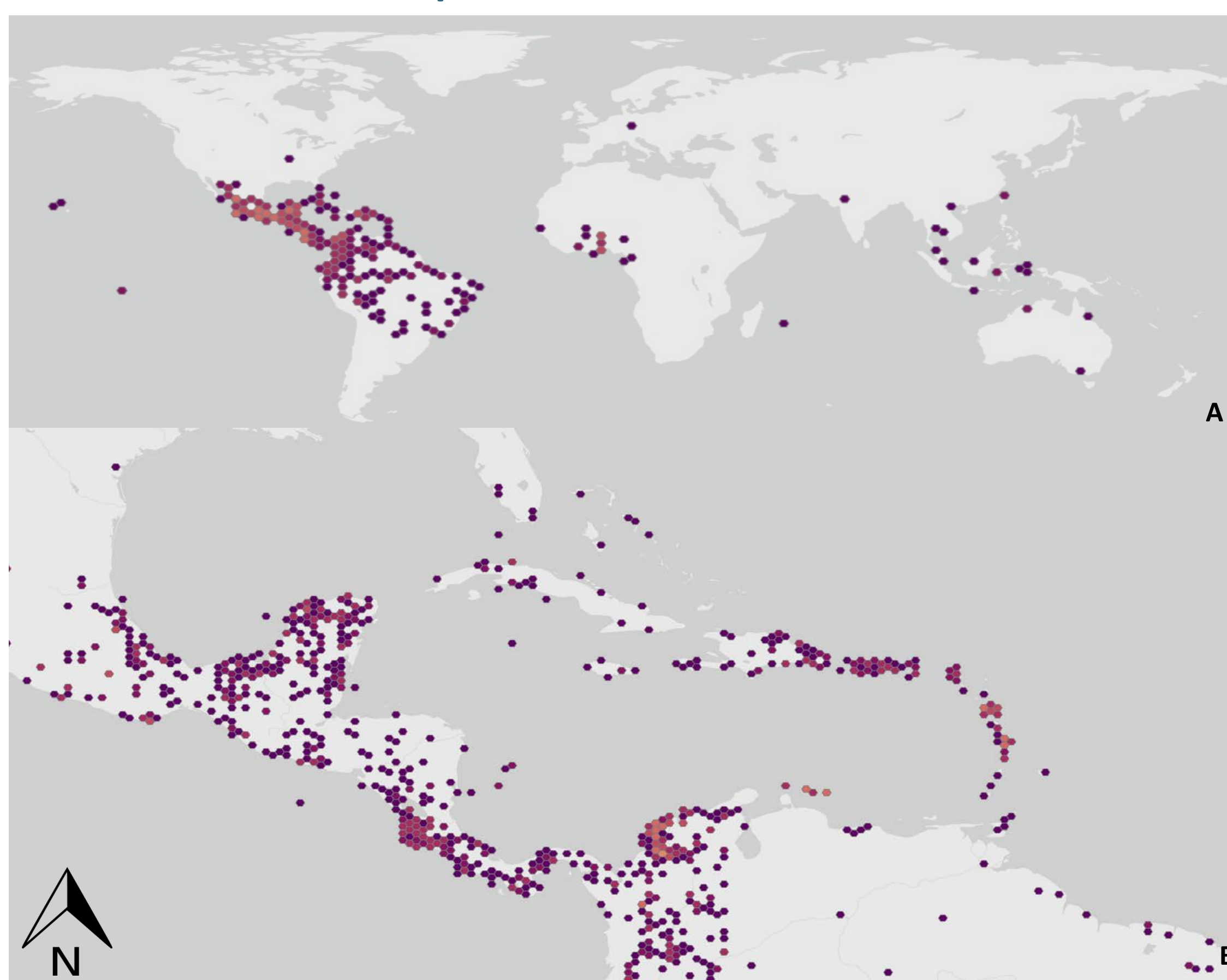
## REFERENCES / CONTACT / MORE INFO >>



## ACKNOWLEDGEMENTS

Dissertation Committee: Dr. Paul Fine, Dr. Lúcia Lohman, Dr. Benjamin Blackman, Fine Lab Group; Dr. Thomas Carlson; Undergraduate Research Students (URAP and volunteers); Department of Integrative Biology; D-Lab Research Consultants; Human Research Protection Program; Volunteer Interview Subjects; Community educators and activists. To my collaborators, partnered institutions, communities and individuals associated with this project in USA, Caribbean, and the Americas - I owe this work to you all! *Much love for my dear mentors (past and present), my family, my friends, and my ancestors...thank you for guiding me in this path and for holding me through this journey.*

## Species Distribution



Maps: A) Global and B) Caribbean geographic distribution of *Crescentia* species.  
 Generated using the Global Biodiversity Information Facility (GBIF, 2023) species occurrences data.